

bath or by a five-hour extraction with hot acidulated alcohol (3 per cent glacial acetic acid) on a steam bath. Treatment of the sections with 72 per cent sulfuric acid caused the yellow-colored phloem fibers to turn green and swell, eventually turning lavender but remaining as large balloon-like bodies and dissolving only partially. The contact with concentrated acid darkens the reddish-brown deposit in the ray cells and periderm cells, but otherwise it is not visibly affected. Thus, in a lignin determination this material would be insoluble and, hence, would be determined as lignin. Extraction with cold 1 per cent NaOH for several days removes a considerable portion of the coloring matter; the same effect can be obtained within a few hours by extraction on a steam bath. If the yellow-colored section remaining after alkali extraction is treated with 72 per cent sulfuric acid, much of the structure disappears; however, the fibers, although greatly swollen, remain intact. The fibers are largely cellulose, but contain some lignin, as well as a small amount of coloring matter. An extended discussion of the chemical composition of redwood bark will appear in a further publication.

The Institute of Paper Chemistry,
Appleton, Wisconsin,
May, 1943.

WILLIAM ALBERT SETCHELL

With the death of William Albert Setchell the botanical profession mourns the loss not only of a great algologist but also of one of its outstanding personalities and of a great and effective humanitarian. The details of his life have been amply treated by others (Goodspeed, T. H., William Albert Setchell, in *Essays in Geobotany in Honor of William Albert Setchell*, University of California Press, Berkeley, 1936). It will suffice here to state that he was born on April 15, 1864, was educated at Yale and at Harvard where he was a fellow and a student of Farlow. Subsequently he served as Assistant Professor at Yale and in 1895 came to the University of California as Professor of Botany retiring as Professor Emeritus in 1935. He died at his home in Berkeley, California, on April 5, 1943, just a few days before his seventy-ninth birthday.

A voluminous bibliography attests his activity in the field of algology. Much of this work was done in cooperation with the late Dr. Nathaniel Lyon Gardner with whom he built up one of the outstanding algological herbaria and libraries of the world, now deposited at the University of California at Berkeley. Together they attempted to complete a comprehensive treatment of the marine algae of the Pacific Coast of North America, of which all but that dealing with the red algae has been published. The

latter was left largely in rough manuscript form. His interests, however, encompassed much more than the algae. His writings and those of his students involve the fungi, bryophytes and some of the flowering plants as well. It was Setchell who initiated and inspired the investigations on tobacco so ably furthered by Clausen, Goodspeed, and the late Dr. Priscilla Avery.

He travelled widely over the world and collected much from diverse sources, bringing home not only specimens which are deposited in the Herbarium of the University of California, but vivid accounts of unusual plants, botanists, fellow travellers and an infinite number of personal anecdotes that delighted all who were fortunate enough to hear him.

To the perennial stream of students that flow through a large university he was a source of inspiration and wise counsel. The needy student was one of his primary concerns; he gave freely of his time and resources—often financing the entire cost for students who became ill and required hospitalization. Sometimes this was accomplished anonymously and at other times directly. When repayment was offered he would reply, "You had better keep it so that you may be able to do the same for somebody else." The gifted student was his special delight. He enjoyed provoking him into argument and never lost an opportunity to trip him. If he could lead him into making a rash statement, the student was never permitted to forget it. Until the day of his death, Professor Setchell was continually surrounded by youth to whom he was a genial host and for whose entertainment he provided the best in music and literature and always a subject for argument. He spoke of these associates as his "nephews" and a few "nieces"; they are to be found the world over and are of several races. All of them knew him fondly as "Uncle Bill" and all of them know each other, if not personally, at least by their reputation as to their ability to argue.

Professor Setchell loved words; he was at his best in an argument with strong opposition where he would let loose such a flow of brilliant terminology that his opponent was often baffled. Once an eminent geologist came in and settled in a chair, utterly exhausted. He remarked, "I have just come from an argument with Setchell. We were discussing the origin and structure of atolls. So long as he used words that I understood I had the better of the argument. Soon, however, he began using words that I had never heard before, presumably terms in my own field. I simply had to back out!" In most commonplace discussions Setchell would make free use of Greek or Latin, or perhaps he could express his idea better with a German word or a chance Maori term picked up in his travels. They were all in his vocabulary ready to be used where they would be most effective.

In teaching he had developed the technique of the showman

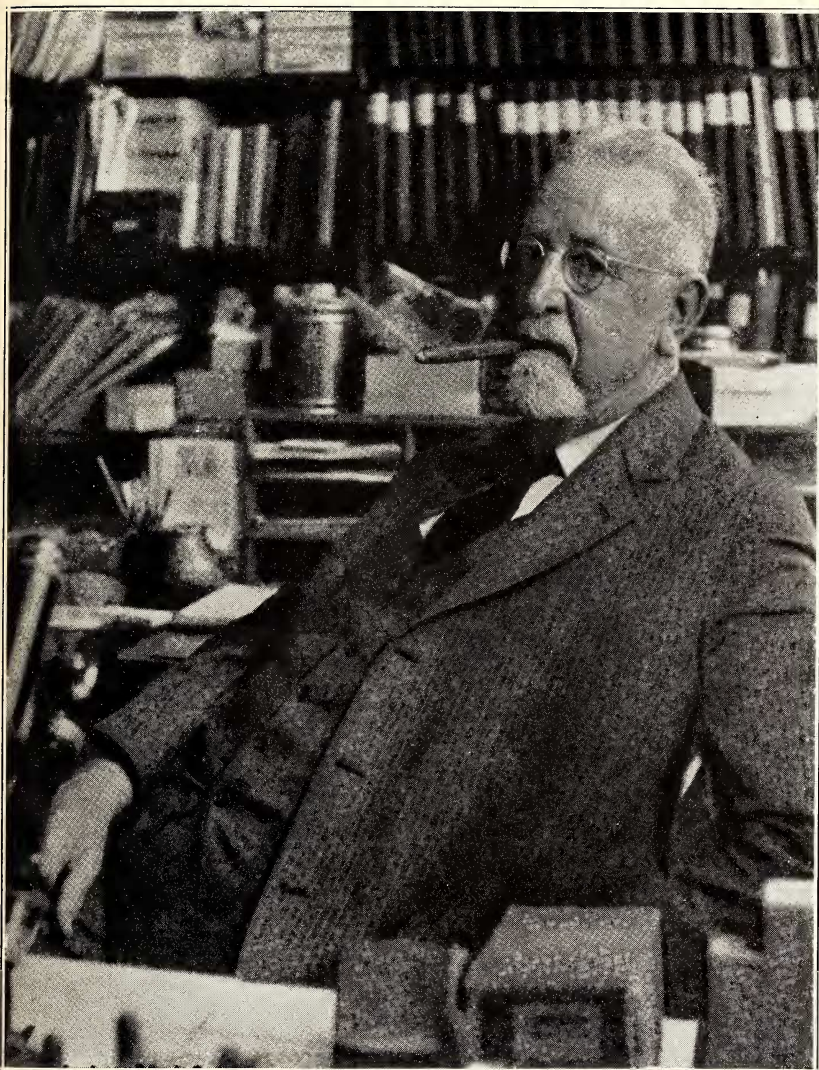


PLATE 19. WILLIAM ALBERT SETCHELL, 1936.